

ABSTRACT

The invention involves a flywheel motor/generator having a holder to maintain the permanent magnets in a circular array on the rotor.

- 5 Unique aspects of the invention include the magnet shapes that are used, the liner/retainer configuration used to secure the magnets, and the construction of the rotor in the immediate vicinity of the magnets. The principal functions of the design are 1) managing stresses in the rotor and the magnets at high speed when centrifugal acceleration can
10 exceed 100,000 g's, and 2) securing the magnets when the assembly is at rest when magnets that are not properly secured can reposition themselves in deleterious ways through mutual attraction or repulsion. Keying features are also provided on the ends of the magnets to aid in assembly of the rotor and to maintain the magnets in the proper
15 orientation.